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COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS TWENTY-FIRST SESSION

(4-13 December 2000)

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ORGANIZATION OF THE SESSION

1. The Committee of Experts on the Transport of Dangerous Goods held its twenty-first session from 4 to 13 December 2000 with Mr. S. Benassai (Italy) as Chairman and Mr. F. Wybenga (United States of America) as Vice-Chairman.

2. The Director of the Transport Division of the Economic Commission for Europe, Mr. J. Capel Ferrer, welcomed participants.

3. He said that all posts in the Dangerous Goods and Special Cargoes Section had now been filled and that the General Assembly had agreed to provide additional resources (a P4 post and a G5 post) for 2001 pursuant to Economic and Social Council resolution 1999/65 concerning the reconfiguration of the Committee and that these resources would also be requested for the 2002-2003 budget.

4. He stressed that ECE was cooperating increasingly closely with the other regional commissions in the sphere of facilitation of transport, and that where the Economic and Social Commission for Asia and the Pacific (ESCAP) was concerned, such cooperation extended to the development of national regulations for the domestic carriage of dangerous goods.

ATTENDANCE

5. Experts from the following countries took part in the session: Argentina; Australia; Belgium; Brazil; Canada; China; Czech Republic; France; Germany; Italy; Japan; Mexico; Netherlands; Norway; Poland; Russian Federation; South Africa; Spain; Sweden; United Kingdom; United States of America.

6. Observers from the following countries took part in the session under rule 72 of the rules of procedure of the Economic and Social Council: Austria; Bahamas; Finland; Islamic Republic of Iran; Portugal; Slovakia; Switzerland; Tunisia.

7. Representatives of the United Nations Economic and Social Commission for Asia and Pacific (ESCAP) and of the following specialized agencies were present: International Civil Aviation Organization (ICAO); International Labour Organization (ILO); International Maritime Organization (IMO) and World Health Organization (WHO).

8. The following intergovernmental organizations were also represented: European Commission; Organization for Economic Co-operation and Development (OECD) and Intergovernmental Organization for International Carriage by Rail (OTIF).

9. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: European Liquefied Petroleum Gas Association (AEGPL); International Association of the Soap, Detergent and Maintenance Products Industry (AISE); European Committee of Paint, Printing Ink and Artists' Colours Manufacturers' Associations (CEPE); Compressed Gas Association (CGA); European Association of Automotive Suppliers (CLEPA); European Cylinder Makers Association (ECMA); European Fertilizer Manufacturers' Association (EFMA); European Industrial Gas Association

(EIGA); Federation of European Aerosol Associations (FEA); International Federation of Freight Forwarders Associations (FIATA); Hazardous Materials Advisory Council (HMAC); International Air Transport Association (IATA); International Chamber of Commerce (ICC); International Council of Chemical Associations (ICCA); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Plastics Packaging Manufacturers (ICPP); International Electrotechnical Commission (IEC); International Road Transport Union (IRU); International Organization for Standardization (ISO); European Secretariat of Manufacturers of Light Metal Packagings (SEFEL); International Union of Railways (UIC) and World Nuclear Transport Institute (WNTI).

WORK OF THE SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Development of provisions for the transport of gases

Documents: ST/SG/AC.10/C.3/32/Add.1
ST/SG/AC.10/C.3/34, annex 1
ST/SG/AC.10/C.3/34/Add.1
} Reports of the Sub-Committee
ST/SG/AC.10/C.3/36, annex 1
ST/SG/AC.10/2000/22 (EIGA)
ST/SG/AC.10/2000/27 (United States of America)
ST/SG/AC.10/2000/30 (CGA)
ST/SG/AC.10/2000/38 (France)

Informal documents: INF.10 (United Kingdom)
INF.16 (United Kingdom)
INF.23 (United Kingdom)
INF.24 (EIGA)
INF.38 (Canada)
INF.39 (ISO)
INF.46 (United States of America)

10. The Committee entrusted the consideration of these documents to the Working Group on Gas Receptacles and Multiple-Element Gas Containers which met from 4 to 7 December 2000, under the chairmanship of Mr. H. Puype (EIGA).

11. The Working Group was requested to keep as far as possible to the compromise solutions already reached at previous sessions of the Sub-Committee.

12. The Working Group was requested only to consider the CGA proposal concerning cryogenic receptacles if time permitted, since the Sub-Committee had already agreed that the question could be considered during the forthcoming biennium.

Report of the Working Group on Gas Receptacles and Multiple-Element Gas Containers (MEGCs)

Documents: INF.63 (Interim report)
INF.69 (Report)
INF.69/Add.1 (Texts adopted by the working group)
INF.77 (Substantive amendments)
INF.79 (Switzerland)
INF.80 (Secretariat)
INF.82 (Secretariat)

13. The Committee took note of the report of the Working Group (INF.69, reproduced as annex I to this report) and considered the proposed texts.

14. The expert from Belgium proposed that a limit should be established in 4.1.6.1.10 to the period during which pressure receptacles could continue to be carried after the expiry of the deadline for the periodic test. Several experts considered that a requirement of this nature could not be implemented easily because the old receptacles had to be transported when they were to be scrapped or tested. The proposal was not adopted.

15. The representative of OTIF said that the table in Chapter 3.2 stipulated instruction P200 for UN No. 1614 (hydrogen cyanide, stabilized, containing less than 3% water and absorbed in a porous inert material) but instruction P200 made no provision for that substance. The Committee noted that packing requirements could be found in marginal 2603 of ADR (see INF.80), but that since they differed from those applicable in the United States of America, it was decided to replace P200 by P099 pending the development of acceptable packing provisions.

16. The observer from Switzerland proposed that paragraph 6.2.2.5.2.6 (c) proposed by the Working Group should be deleted on the grounds that, in his opinion, the fact of leaving companies free to choose an inspection body from among those approved by the competent authority would be in contradiction with the independence such bodies needed to have vis-à-vis the companies they inspected. The proposal was not adopted.

17. In 6.2.2.6, the expert from Sweden noted that, in order to identify the country in marking gas cylinders, the Working Group had replaced the alpha-2 code defined in standard ISO 3166-2:1997 by the distinguishing sign of the State used for vehicles in international traffic in accordance with the Vienna Convention on Road Traffic. She said that the letter "S" for Sweden could be confused with the letter "S" used for solids. The representative of ISO said that he hoped that the Committee would go back on that decision since ISO recommended the generalized use of the alpha-2 code for the immediate future, particularly in order to facilitate data exchange in international trade. The Committee, however, followed the Working Group's opinion in this regard.

18. A proposal by the observer from Switzerland for the deletion of paragraph 4.2.4.4, the purpose of which was that the transport of MECGs should not be permitted after the expiry of the deadline for periodic inspection because it was not possible to verify whether a receptacle had been filled before or after that date, did not receive support.

19. In addition to the text submitted in informal document INF.69/Add.1, adopted with some amendments, the Committee adopted the substantive amendments submitted in document INF.77 and consequential amendments to other packing instructions as listed in INF.82, again with some changes. All finally adopted amendments to the Model Regulations annexed to the 11th revised edition of the Recommendations on the Transport of Dangerous Goods are listed in annex 2 to this report (see ST/SG/AC.10/27/Add.1).

20. The expert from Belgium, taking up the proposal by the Working Group (see annex 1 to this report, para.14) that its mandate should be renewed for the forthcoming biennium in order to deal with matters which still needed to be discussed by the Sub-Committee or ISO (cryogenic receptacles, provisions concerning the carriage of liquefied petroleum gas and acetylene, composite material gas cylinders, pressure drums and additional service requirements concerning filling and requalification), hoped that the work would not involve major amendments to the texts which had just been adopted.

21. The Chairman said that the Working Group had defined a number of points which remained pending, and that if the proposals relating to them were numerous and detailed, it was preferable that they should be considered initially by the Working Group. Otherwise, they could be studied directly by the Sub-Committee.

Draft amendments to the Recommendations on the Transport of Dangerous Goods, including the Model Regulations on the Transport of Dangerous Goods and the Manual of Tests and Criteria, and related proposals

Reference documents: ST/SG/AC.10/C.3/32/Add.2, ST/SG/AC.10/C.3/34/Add.2, ST/SG/AC.10/C.3/36/Add.1 } Draft amendments adopted by the Sub-Committee

Documents: ST/SG/AC.10/2000/7 and -/Corr.1 (Secretariat)

22. The Committee considered the consolidated draft amendments to the Model Regulations and made some corrections. The consolidated list of amendments to the Model Regulations adopted by the Committee is reproduced in annex 2 to this report (ST/SG/AC.10/27/Add.1).

Corrosiveness of liquids and solids belonging to Class 8, Packing Group III, for steel and aluminium

Document: ST/SG/AC.10/C.3/2000/24 (Germany)

23. The expert from Germany reiterated the request he had made at the last session of the Sub-Committee for comments on the proposal and asked that the question should be placed on the Committee's programme of work for 2001-2002; his request was accepted. He said that he would invite interested experts to an informal working group to be convened in Germany.

Explanations concerning the codes used in the lists of self-reactive substances and organic peroxides

Informal document: INF.32 (United Kingdom)

24. The proposal by the expert from the United Kingdom was adopted but the explanations in question would be reproduced in a NOTE preceding the lists rather than in the remarks at the end (see annex 2).

Requirements for diagnostic specimens

Informal documents: INF.8 (United States of America)
INF.51 (WHO)

25. The proposal by the expert from the United States of America not to introduce a specific UN number for diagnostic specimens was not adopted.

26. The Committee noted WHO's position concerning diagnostic specimens, infectious substances and biological products, particularly WHO's wish to review generally the rules for the carriage of infectious substances and diagnostic specimens by doing away with the classification by risk group. This revision could be included in the programme of work provided that practical proposals were submitted; cooperation with the Contracting Parties to the Basel Convention and the Universal Postal Union should also be envisaged.

4-Nitrophenylhydrazine

Documents: ST/SG/AC.10/C.3/2000/40 (United States of America)
ST/SG/AC.10/2000/24 (United States of America)

27. Several experts considered that the substance in the proposal by the United States of America should be considered as a water-wetted explosive and should not in principle be classified as a self-reactive substance but as a desensitized explosive. The proposal by the United States of America, with an amendment consisting in applying to the substance a provision similar to special provision 28, was put to the vote but was not adopted.

Informal document: INF.65 (United States of America)

28. Following the above decision, the expert from the United States of America proposed that 4-nitrophenylhydrazine should be classified in Division 4.1 as a desensitized explosive in order to take account of the opinions expressed. This proposal was adopted (see annex 2).

Gas generators for seat belts

Document: ST/SG/AC.10/2000/11 (Japan)

Informal document: INF.6 (Norway)

29. The proposal by Japan followed on from the discussion of the Sub-Committee (see ST/SG/AC.10/C.3/36, para. 59) and its purpose was to include gas generators for seat belts in the description of UN Nos. 0503 and 3268.

30. Several experts considered that these gas generators were not comparable to seat-belt pretensioners since they were simply pyrotechnic devices which should only be included in Class 1.

31. Other experts considered that logical consistency was required with the decisions taken for air bag inflators, air bag modules and seat-belt pretensioners.

32. The proposal by Japan was put to the vote but was not adopted; the text in square brackets for UN Nos. 0503 and 3268 in document ST/SG/AC.10/2000/7 was therefore deleted (see annex 2).

Sequence of information in the transport document

Document: ST/SG/AC.10/2000/36 (IATA)

Informal documents: INF.5 (HMAC)
INF.7 (United States of America)
INF.27 (Canada)
INF.36 (CTIF)
INF.62 (New Zealand)

33. The representative of IATA asked that the Committee should go back on the Sub-Committee's decision to modify the sequence of information required in the transport document, since he considered that the sequence was of little importance from the safety point of view but that the change would entail enormous expenses for the air transport sector, partly because of the updating of computing systems and partly because of training programmes.

34. This opinion was shared by the experts from the United States of America and Canada who had given detailed arguments in their respective informal documents. They said that it must be possible to justify any amendment to their national regulations on grounds of safety, particularly if such amendments gave rise to costs for industry; in the case in question there was no real justification. They therefore reserved the possibility of not applying the new sequence if it was adopted by the Committee.

35. In informal documents INF.5 and INF.36, HMAC and CTIF also supported IATA's proposal, and the representative of ICAO said that her organization was similarly not in favour of the change recommended by the Sub-Committee.

36. The experts from Norway and the United Kingdom expressed surprise at the stance taken by CTIF and said that the national CTIF committees in their respective countries had not been consulted and did not share that point of view. Like several other experts and observers, they considered that putting the UN number first in the transport document was an important safety feature in the context of international transport in multilingual regions like Europe, where the language used in the transport document, which was not necessarily English as in the United States or in air transport, was not always understood by the emergency services.

37. The expert from Belgium recalled that he had submitted a proposal to the Sub-Committee not to prescribe a specific sequence, but that it had been rejected. The expert from France and the representative of ICCA had considered that this would be an appropriate solution to the dispute caused by divided opinions regarding the sequence of information.

38. The Committee took note of the information submitted by the observer from New Zealand who supported the IATA proposal but noted that in his country a specific sequence was not obligatory.

39. The representative of UIC said that for international rail transport putting the UN number in first place was a safety factor, since during a first emergency response to an accident railway workers and the emergency services were not in a position to understand a chemical name, particularly if it was in a foreign language. It was only during the second stage of the response that specialists could make use of the information stemming from a chemical name. He also said that the Committee had adopted amendments to the information to be included in the transport document, in particular as regards the subsidiary risk, and that this would in any case force industry, for clearly justified safety reasons, to modify its computing systems and train staff. A simultaneous modification of the sequence of information would not therefore entail additional expense. He proposed that initially both sequences should be authorized.

40. The representative of IATA said that he was amending his proposal to permit the optional use of both sequences. The representatives of Germany, Canada and the United States of America said that, in view of the discussion, they supported the revised IATA proposal.

41. The representative of the United Kingdom said that this compromise was not desirable since his country's industry would like there to be no possible differences between the various modal or national regulations and that a single sequence, applicable worldwide, should be used for all transport modes.

42. The experts from Belgium and France and the observer from the Bahamas said that this compromise was liable to leave the choice of prescribing one or other of the two sequences to each country and each international organization and that this would not settle the ongoing problem. If the compromise was to be effective from the point of view of the facilitation of international transport, it would be essential that all national and international regulations should authorize the optional use of each of the two sequences. They therefore asked ICAO and IATA what their intentions were in that regard.

43. The representative of ICAO said that her organization had not discussed that option and that she could not therefore state a position. The representative of IATA said that as a matter of principle the IATA regulations would be brought into line with ICAO's Technical Instructions.

44. The compromise proposal was adopted by a large majority (see annex 2).

Limited quantities (placarding of transport units)

Documents: ST/SG/AC.10/2000/10 (Australia, Germany and Sweden)

Informal documents: INF.15 (AISE)
INF.17 (CEPE)
INF.21 (ICCA)
INF.26 (Canada)
INF.34 (United Kingdom)
INF.42 (United States of America)
INF.50 (FEA)
INF.57 (Australia, Germany, Sweden)

45. Some experts considered it premature to take a decision on the placarding of transport units. They thought that the placard proposed by Australia, Germany and Sweden would not be acceptable to all countries or all transport modes, and that there was a risk of creating more problems for the future than would be solved.

46. Other experts hoped that a decision would be taken at the present session since they deemed it indispensable to identify transport units containing dangerous goods packed in limited quantities, for example, for safety in road and rail tunnels. They pointed out that a requirement of this nature was already to be found in the IMDG Code for maritime traffic, but that the "Limited Quantities" marking on transport units was not considered satisfactory; they would prefer a marking within a diamond, which was more representative of the transport of dangerous goods.

47. The Chairman reminded the meeting that the Sub-Committee had already decided in principle that transport units carrying dangerous goods packed in limited quantities should be identified by appropriate placarding (ST/SG/AC.10/C.3/36, para. 68).

48. The expert from the United Kingdom mentioned a research project by OECD and the Permanent International Association of Road Congresses (PIARC) on the carriage of dangerous goods in road tunnels, which had been made available to interested experts; he stated that dangerous goods packed in limited quantities did not represent a hazard in tunnels requiring additional regulations.

49. The expert from France disputed this point of view and said that the project in question contained proposals for risk-assessment and decision-making with reference to prohibiting, regulating and monitoring the movement of vehicles using road tunnels. He said that according to the risk-assessment models, it could be concluded that for the same quantities of flammable substances, the risk in tunnels in the event of fire for substances packed in limited quantities and

substances packed in regulation packagings or in tanks was at least the same if not greater because of the poor resistance and ready combustibility of the packagings used (paperboard and plastics).

50. On the basis of the comments in the various informal documents, the experts from Australia, Germany and Sweden had submitted a new proposal (INF.57), on which the Chairman proposed that the Committee should take a decision.

51. The expert from the United States of America referred to document ST/SG/AC.10/2000/21, submitted by Germany, pointing out that the Model Regulations had reached a suitable level of maturity and that any new proposal for amendment must be backed by appropriate justifications based on risk analysis. He thought that the present session was not the right moment to take a decision on so important a question on the basis of informal documents and proposed that a vote should first be taken on whether a decision should be taken immediately.

52. His proposal was supported by the expert from Canada, but when a vote was taken it was rejected.

53. Some experts then expressed the hope that the Committee would also take a decision on the proposal by ICCA whereby only the specifications for a placard, which could be used when national or international modal regulations required but would not be systematically prescribed, would appear in the Model Regulations.

54. After some discussion on the procedure, the Chairman proposed that a vote should first be taken on the proposal contained in informal document INF.57, on the understanding that if it was adopted a vote would then be taken on the proposal contained in document INF.21 to clarify under what conditions the placard was required.

55. The proposal by Australia, Germany and Sweden (INF.57) was put to the vote but was not adopted.

Ammonium nitrate entries

Document: ST/SG/AC.10/2000/19 (Germany)

Informal document: INF.40 (Germany)

56. The proposal by Germany was intended to introduce under UN No. 2067 mixtures of ammonium nitrate and incompatible substances such as potassium chloride, ammonium phosphate and ammonium sulphate, and mixtures containing more than 0.4 per cent organic or combustible substances overall. The expert from Germany said that one option would be to cover all organic material in special provision 307. Another option would be to delete the word "compatible".

57. The representative of EFMA said that, in view of dramatic accidents that had occurred after the Second World War as a result of those mixtures, there was a need to establish a maximum threshold for organic or combustible substances. He thought that the proposal by Germany was the result of experiments on impact sensitivity, but did not take sufficient account of the oxidizing or self-heating properties of such mixtures.

58. The Committee finally agreed an option presented by the expert from Germany to amend paragraph (c) of special provision 307 to cover all inorganic materials, by deleting the word "compatible" (see annex 2).

Responsibility for the classification of dangerous goods

Document: ST/SG/AC.10/C.3/2000/13 (Argentina)

59. Several experts considered that the provisions proposed by Argentina in 2.0.0 were unnecessary since it was already specified that, depending on the case, the competent authority, or the consignor in the majority of cases, was responsible for the classification. In signing the declaration in the transport document, the consignor accepted responsibility for the classification, and national legislation could provide for checks and penalties in the event of a breach.

60. The Committee did not adopt the proposal by Argentina, and asked Argentina to reconsider the question on the basis of comments received.

Plastics packagings for nitric acid

Document: ST/SG/AC.10/2000/3 (Belgium and Netherlands)

Informal document: INF.11 (United Kingdom)

61. The expert from the United States of America noted that Packing Group I nitric acid met the criteria for both Class 8 and Division 5.1 at the Packing Group I level and required specialized packagings. Nevertheless, the Committee adopted the proposals concerning the use of plastics packagings for nitric acid of Packing Group I and for hydrofluoric acid, noting, as indicated by ICPP, that such packagings were currently permitted and used without safety problems (see annex 2).

Packagings for genetically modified micro-organisms (UN No. 3245)

Document: ST/SG/AC.10/2000/39 (United States of America)

62. The Committee agreed to the proposal to specify in paragraph (1) of packing instruction P904 that packagings should conform to the Packing Group III performance level, since this instruction was effectively intended to provide for the authorization of all packagings permitted according to packing instructions P001 or P002.

63. Following a comment by the expert from Belgium, the Committee confirmed that if packagings conforming to the Packing Group III performance level were permitted, those conforming to the level of Packing Groups I and II were also permitted; this provision should be taken as a minimum requirement.

Test report for packagings intended for infectious substances (Chapter 6.3)

Document: ST/SG/AC.10/2000/15 (United Kingdom)

64. The proposal by the United Kingdom to add a section 6.3.3 was adopted (see annex 2).

Remanufacturing, repair and routine maintenance of IBCs

Documents: ST/SG/AC.10/2000/5 (Belgium)
ST/SG/AC.10/2000/37 (ICCR, ICCP, ICIBCA, ICCA)

65. After considering the proposals by Belgium and the comments on them by ICCR, ICCP, ICIBCA and ICCA, the Committee adopted several amendments to the provisions adopted by the Sub-Committee relating to the remanufacturing, repair and routine maintenance of IBCs (see annex 2).

66. The proposal concerning paragraph 4.1.2.5 was not adopted.

Packagings for paints and inks

Document: ST/SG/AC.10/C.3/2000/3 (Argentina)

67. As regards the first comment by the expert from Argentina on the differences between the Model Regulations and the IMDG Code, the Committee noted that these differences had ceased to exist in amendment 30 to the IMDG Code.

68. Where the second proposal concerning tests for 1A1 packagings intended for the carriage of low viscosity solvents was concerned, the expert from Argentina was invited to submit a more specific proposal for the amendment of the existing texts in the course of the forthcoming biennium.

Use of "W" marks for large packagings

Document: ST/SG/AC.10/C.3/2000/7 (Argentina)

69. The Committee noted that the text of paragraph 6.6.1.3 for large packagings corresponded to that of paragraph 6.1.1.2 for packagings, and that if the paragraph was divided into two separate paragraphs, the same logic should be applied to 6.1.1.2. In addition, paragraph 6.6.1.4 proposed by Argentina did not include the important provision to the effect that the other test methods authorized by this paragraph must be equivalent to those of Chapter 6.6.

70. The expert from Argentina said that she would like to consider these issues in more detail and that she might submit a revised proposal in the course of the forthcoming biennium.

Ammonium nitrate emulsions

Documents: ST/SG/AC.10/2000/20 (Report on the July 2000 working group session)
ST/SG/AC.10/2000/14 (Canada)

Informal documents: INF.9 (Australia)
INF.14 (France)
INF.18 (United States of America)
INF.37 (HMAC)
INF.41 (Germany)
INF.66 (France)

71. A working group met during the session for a preliminary perusal of these documents. The chairman of the working group, Mr. A Johansen (Norway), said that after two years of work the working group had been unable to develop a satisfactory system of testing and that the work should continue during the forthcoming biennium.

72. Several experts recalled that these emulsions were carried in considerable quantities throughout the world and that France had already put forward a proposal two years previously to settle a practical problem since there was no current agreement on how to classify, identify and transport these substances. They therefore proposed that an interim solution should be adopted on the basis of informal documents INF.9 and INF.66 which would at least enable the emulsions, suspensions and gels to be classified and identified and ground rules to be established for their carriage, although classification and carriage would be subject to the approval of the competent authorities.

73. Other experts preferred that no decision should be taken at the current session and that an informal working group should be reconstituted for the forthcoming biennium.

74. The expert from the United States said that the informal working group which had met during the current biennium had already put forward good proposals at the Engene (Norway) meeting in October 1999, and that it had only been at the last session of the Sub-Committee that some delegations had called these proposals in question, at the level of the working group. The working group had then introduced new tests, providing test data, on the understanding that the results would be communicated at the session of the Committee; that had not happened. He said that he was therefore against a new meeting of the informal inter-sessional working group, because the working group did not have a precise mandate and because there was no assurance that the test results would be available and also because such informal meetings were very expensive. He would possibly prefer a meeting of a working group during the Sub-Committee's ordinary session in July 2001.

75. The Committee finally decided to adopt a provisional solution which was to classify these substances in Division 5.1, Packing Group II and to leave to the competent authorities the responsibility of determining the conditions of carriage. A search for a definitive solution should be made during the forthcoming biennium.

76. A representative of ICCA proposed that a session of an informal working group should be organized by the industry in Spain in April. Six experts said that they would like to take part while another two would have preferred the working group to meet during the Sub-Committee's session.

Informal document: INF.74 (Norway)

77. On a proposal by the chairman of the working group, the Committee agreed that the working group should consider the following documents:

- ST/SG/AC.10/2000/20 and -/Corr.1;
- Informal documents INF.9, INF.14, INF.18, INF.37, INF.41, INF.54 and INF.72, submitted at the present session;
- Report of the Committee on its twenty-first session;
- New documents containing the results of tests on the new proposed test series 8.

The group's mandate is:

- To determine appropriate classification criteria;
- To prepare and assess new and existing test methods so as better to evaluate the explosive properties of the emulsions, suspensions and gels;
- To propose appropriate conditions of carriage for each type, particularly in respect of packagings, IBCs and tanks.

Draft ISO standard on packagings for dangerous goods

Informal document: INF.22 (United Kingdom)

78. The expert from the United Kingdom reminded the meeting that draft standard ISO/EN 16104 was in the process of preparation with the aim of interpreting section 6.1.5 and standardizing the approach of the test system for packagings for dangerous goods. He said that a final vote on the draft standard would take place in spring 2001 and, on behalf of the ISO/CEN working group concerned, he submitted proposals for amendments to Chapter 6.1 which could be taken into account in the standard if the Committee adopted them. There were also issues which the ISO/CEN working group asked for guidance on in developing possible proposals for the next biennium.

79. Several experts entered a reservation of principle regarding the procedure, since the proposals were new, had not been submitted to the Sub-Committee and had not even been submitted to the Committee as an official document. It was therefore agreed that any decisions made would only concern proposals of a strictly non-substantive nature.

80. The expert from the United Kingdom said that the proposals were aimed at solving practical problems encountered during tests. He recalled that the ISO/CEN working group included test specialists accredited by the Governments. The proposals now put forward had only been finalized in November. Any comments by the experts on the Committee concerning the draft standard could be transmitted to him in writing by the end of March and he would pass them on to the ISO/CEN working group.

81. The expert from France considered that the mandate of the ISO working group was to supplement Chapter 6.1 by interpretation and classification, but finally the draft standard took the regulations and rewrote them in a different form. He pointed out that this proposal was tantamount to attempting to amend the regulations on the basis of a draft standard which had not yet been adopted. Furthermore, replacing requirements of the Model Regulations by references to standards containing requirements, was tantamount to transferring decision-making on the development of the regulations in terms of safety to non-governmental bodies.

82. Following a number of exchanges on the nature of each of the proposals, the expert from the United Kingdom withdrew his document and reiterated his invitation to the experts of the Committee to submit comments to him in writing so that he could advise the ISO/CEN working group and prepare an official proposal for the forthcoming biennium.

Portable tanks

Informal documents: INF.3 (UIC)
INF.44 (United States of America)

83. The representative of UIC said that it would be difficult for portable tank operators to implement the provisions of Chapter 4.2 since the minimum test pressure values given in 4.2.4.2.6 for the instruction for carriage in portable tanks (T) applicable for a given substance according to the table in Chapter 3.2 did not necessarily correspond to the test pressure for that substance which should be calculated according to 6.7.2.1. This situation would force consignors to make complicated calculations for each substance carried, and in a concern for simplification, particularly for multiple-use tanks, he proposed that only the test pressure given in 4.2.4.2.6 should be taken into account.

84. The expert from the United States of America said that when the working group on portable tanks had drawn up these provisions, it had been quite clear that the test pressure for a given substance should also be calculated, and that of the value obtained from the calculation and the value given in 4.2.4.2.6 the higher of the two should be kept. He proposed in informal document INF.44 that the texts should be amended to clarify this interpretation.

85. Opinions were divided on this question. The UIC proposal would simplify the situation but would not fulfil the original intention of the working groups which had developed the requirements. The proposal by the United States of America seemed to fulfil the original intentions but did not provide an answer to the question of the practical implementation of the requirements and moreover contained new requirements concerning the liability of consignors.

86. Since the documents in question were informal documents, several delegations preferred that no decision should be taken at this session before they had consulted their experts.
The Chairman said that overall the Committee considered that improvements were necessary and that, if it was possible to simplify the requirements, proposals for the purpose would be welcome. He recommended, however, that in the future such issues should only be dealt with on the basis of official proposals submitted in time.

Informal document: INF.67 (Sweden)

87. Contrary to the decision taken by the Sub-Committee (see ST/SG/AC.10/2000/7, amendments to Chapter 6.7), the Committee considered that the terms "yield strength" and "proof strength" were the correct terms for the English version, rather than "yield stress" and "proof stress".

Packing instruction IBC03, special provision B11

Informal document: INF.60 (United Kingdom)

88. It was pointed out that there was a contradiction between the additional provision of instruction IBC03, which provided that only liquids with a vapour pressure equal to or less than 110 kPa at 50° C, or 130 kPa at 55° C, were permitted, and the new special provision B11 (see ST/SG/AC.10/2000/7) which permitted ammonia solution (UN No. 2672) in concentrations up to 25%, although some of these solutions had a vapour pressure greater than 110 kPa at 50° C.

89. It was recalled that the authorization of these solutions in IBCs was the result of a compromise; the expert from the United Kingdom proposed an amendment to the additional provision of packing instruction IBC03 to eliminate the contradiction. The amendment was adopted (see annex 2).

Transport of solids in bulk containers

Documents: ST/SG/AC.10/2000/1 (Germany)
ST/SG/AC.10/2000/16 (United Kingdom)

Informal documents: INF.4 (United Kingdom)
INF.35 (Germany)

90. Informal document INF.35 was the follow-up to the Sub-Committee's request to the expert from Germany to prepare a new consolidated text for requirements for the transport of solids in bulk containers (ST/SG/AC.10/C.3/36, para. 21).

91. The Committee considered that the texts prepared were not at a sufficiently advanced stage for adoption at the present session; the experts from Germany and the United Kingdom were invited to prepare a joint proposal concerning all aspects of the transport of bulk solids in different types of transport equipment. Experts who had made comments at the present session or who wished to do so were asked to transmit them in writing by the end of March to the experts from Germany and the United Kingdom.

Miscellaneous proposals for amendments

Document: ST/SG/AC.10/2000/2 (IMO)

Informal documents: INF.68 and INF.68/Rev.1 (Vice-Chairman)

92. The Committee entrusted the consideration of IMO's proposals to a working group chaired by the Vice-Chairman and adopted its report (INF.68/Rev.1 reproduced as annex 3 to this report) (see also annex 2 for adopted amendments).

Lithium batteries

Documents: ST/SG/AC.10/2000/13 (Japan and United States of America)
ST/SG/AC.10/2000/25 (United States of America)
ST/SG/AC.10/2000/40 (Japan)

Informal documents: INF.13 (United Kingdom)
INF.31 (France)
INF.52 and INF.56 (IEC)
INF.81 (Working group)

93. The review of proposals concerning lithium batteries was entrusted to a working group chaired by the Vice-Chairman; the texts finalized by the group were submitted in informal document INF.81.

94. The expert from the United Kingdom said that he considered revised special provision 188 unduly restrictive, and that only tests 1 to 5 were appropriate. He proposed that tests 6, 7 and 8 should be eliminated, but his proposal received no support and was not adopted.

95. The Committee adopted the texts proposed by the working group with some corrections (see annex 2 for special provisions 188 and 230 and annex 4 for section 38 of the Manual of Tests and Criteria).

96. The expert from the United Kingdom said that the prototypes of the lithium batteries currently transported had already been approved in accordance with the current test system, and he proposed that the Committee should, contrary to its practice, make provision for transitional measures for the application of these new tests so as to ensure harmonized and simultaneous implementation for all transport modes.

97. The Committee did not take a decision on this suggestion. The Committee felt that it might be better to consider more comprehensively addressing transitional provisions as appropriate in future revisions of the Model Regulations.

New proposals

Classification of rubber scrap or rubber shoddy

Document: ST/SG/AC.10/2000/8 (Australia)

98. The proposal by Australia to apply special provision 223 to UN No. 1345 was adopted (see annex 2).

Editorial amendments to Chapter 4.1

Document: ST/SG/AC.10/2000/33 (United Kingdom)

Informal documents: INF.73 (Secretariat)
INF.76 (Drafting group)

99. Several experts considered that the editorial amendments proposed by the United Kingdom were tantamount to applying certain general provisions of Chapter 4.1 to the carriage of substances of Classes 2 and 7 and Division 6.2.

100. A drafting group was established to study the question. The amendments to Chapter 4.1 adopted by the Committee can be found in annex 2.

Radioactive material

Informal documents: INF.70 (Secretariat)
INF.75 (Secretariat)

101. The Committee adopted the corrections to the provisions concerning Class 7 proposed by the secretariat to take into account the corrections by IAEA to the Regulations for the Safe Transport of Radioactive Material (Errata to publication ST-1), and the minor amendments adopted by the IAEA's "Revision Panel" at its session from 4 to 8 September 2000 (INF.70).

102. The Committee also took note of the changes of detail adopted by the "Revision Panel" at that session; as they had not yet been formally adopted by IAEA (INF.75), they could only be taken into account in the next biennium.

Transport of sulphur

Document: ST/SG/AC.10/2000/35 (Austria)

Informal document: INF.19 (Austria)

103. The observer from Austria proposed that special provision 242, which exempted from the Model Regulations sulphur when transported in packages of less than 400 kg or when it had been formed to a specific shape, should be deleted. His proposal followed on from an accident in which a load of sulphur in bags had caught fire and the emergency response teams had had difficulty in bringing the fire under control because they had not been informed of the dangerous nature of the load. He said that even if pure sulphur and some special forms did not meet the

classification criteria, experience had taught that a fire gave off toxic sulphur dioxide which, in combination with water, became sulphurous acid which was liable to pollute the water table.

104. Several experts said that the variety of sulphur involved in the fire had been an impure sulphur liable to break down into dust and that the fire had been due to that dust. The expert for Germany informed the Committee that sulphur dust can lead to dust explosion but only in receptacles with a capacity about that authorized for packagings. Tests on most varieties of sulphur, particularly sulphur in a specific form, showed that sulphur did not meet the criteria of Division 4.1. It was also recalled that it was on the basis of data submitted in 1992 that the Committee had taken its decision on special provision 242. Some experts felt that the cause of the fire had not been determined. Contributing factors might have been sulphur contaminated with fuel and the use of mechanical equipment during the clean-up.

105. The opinions of the experts were divided; some were in favour of regulating sulphur in all its forms, others favoured its regulation only when it was liable to form powder, and others still considered that all forms should be exempted. After a first vote in which the proposal by Austria to delete special provision 242 was rejected, the Committee voted on a verbal proposal by the expert from France that only specific forms which were not liable to produce powder should be exempted; this proposal was adopted (see annex 2).

Exclusion from Class 1

Informal document: INF.53 (ICAO)

Definition of flammable liquids

Informal document: INF.55 (ICAO)

106. The two proposals by ICAO had been submitted late in the form of informal documents and the discussion revealed divergences of opinion among the experts. It was therefore considered preferable to postpone the discussion until the next session when the documents would be submitted officially.

IMPLEMENTATION OF RESOLUTION 1999/62 OF THE ECONOMIC AND SOCIAL COUNCIL

Publication of the eleventh revised edition of the Recommendations on the Transport of Dangerous Goods (Model Regulations) and the third revised edition of the Manual of Tests and Criteria

Background document: ST/SG/AC.10/2000/41 (Secretariat) (Text of resolution 1999/62)

Documents: ST/SG/AC.10/1/Rev.11 and Corrigenda 1 and 2
ST/SG/AC.10/11/Rev.3

107. The Committee noted the information provided by the secretariat in the annotated agenda (ST/SG/AC.10/26/Add.1) and urged the secretariat to publish the eleventh revised edition of the

Recommendations in Arabic and Chinese*, as well as the third revised edition of the Manual of Tests and Criteria in Arabic, French and Spanish.

108. The Committee noted that the secretariat was studying the possibility of publishing the Recommendations on CD-ROM, but that, due to the cost of developing a suitable product and related investments, no arrangement had yet been made. Delegations who would like to contribute financially to the development of such a product were invited to contact the secretariat. The secretariat was invited to pursue its efforts in this respect and to envisage the possibility of making the Model Regulations available via INTERNET.

109. The expert from Canada said that, once the electronic files of the 12th revised edition of the Recommendations would be made available, she would provide experts of the Committee with a searchable version on CD-ROM in any language available electronically.

Activities of international organizations concerned with regulations or recommendations on the transport of dangerous goods at an international level

110. The representative of IMO said that a new version of the International Maritime Dangerous Goods (IMDG) Code, reformatted and amended on the basis of the UN Model Regulations, 11th revised edition, was now available and would be applicable as from 1 January 2001 with a one year transitional period.

111. He also said that the IMO Maritime Safety Committee had agreed to amend Chapter VII of the International Convention for the Safety of Life at Sea (SOLAS, 1974, as amended) to make the IMDG Code mandatory as from 1 January 2004. This implied that the next amendment (Amdt. 31) to the IMDG Code based on the 12th revised edition of the UN Recommendations would become legally applicable only on 1 January 2004. Similarly, further amendments could be adopted with a periodicity of two years (provided that the Maritime Safety Committee would accept to review its present policy of amending the instruments made mandatory under SOLAS every four years only) but they would enter into force only three years after the UN Committee's sessions i.e. one year later than amendments to other international instruments such as the ICAO Technical Instructions, ADR and RID. He said that the IMDG Code itself could be published earlier, and if IMO member States wished to, they could recommend the application of revised versions of the IMDG Code one year before formal entry into force of amendments according to the SOLAS amendment procedure, e.g. on 1 January 2003 in the case of the next version.

112. A member of the secretariat said that the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) had also been amended to reflect the provisions and the format of the UN Model Regulations, and that these amendments should enter into force on 1 July 2001, with an eighteenth month transitional period. ADR now counts 36 Contracting Parties, including fourteen European Union countries, and in addition the provisions of its annexes A and B, as well as those of RID are made applicable to national traffic in European Union countries through European directives. It was foreseen that ADR and RID would be amended on 1 January 2003 to enforce the twelfth revised edition of the Model Regulations.

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* *Note by the secretariat: The Chinese version was issued in January 2001 (Sales No. C.99.VIII.1).*

113. The Committee was also informed that a new European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) had been adopted on 25 May 200 under the auspices of the UN/ECE and of the Central Commission for the Navigation of the Rhine (CCNR), and the Secretary General of the United Nations was depositary of this new agreement, as well as of ADR. This new agreement concerns the carriage of dangerous goods in packaged form, but also in bulk carriers and tank vessels. There are already seven signatory States, and the annexes to the Agreement are going to be reformatted, even though they are not yet in force, on the same model as ADR.

114. The Committee noted that ESCAP had published Guidelines for the Establishment of National and Regional Systems for Inland Transport of Dangerous Goods for its member States, and that these guidelines recommended the application of the UN Model Regulations in the region, as well as the additional regulations of RID, ADR and ADN for specific inland transport modes.

115. Several experts considered that in future, the Committee should provide guidance for recommended implementation dates of amendments to the UN Model Regulations in order to ensure harmonization at world wide level.

116. Upon a question by the representative of IMO, it was confirmed that when a name is indicated in capital letters between parenthesis after the proper shipping name in column 2 of the Dangerous Goods List, this name may be used as an alternative proper shipping name (e.g. for UN 1170 ETHANOL (ETHYL ALCOHOL), the consignor may declare the goods as "ETHANOL" or as "ETHYL ALCOHOL").

117. Answering another question of the representative of IMO, the expert from Belgium confirmed that, contrary to the Model Regulations, a dangerous goods transport document is required by the IMDG Code for dangerous goods carried as dangerous goods packed in limited quantities for personal or household use under the provisions of Chapter 3.4.

Periodicity of amendments to the Recommendations on the Transport of Dangerous Goods

118. The Committee noted that all international organizations implementing the UN Recommendations were now following the two year cycle of amendments, and that the question would be discussed again within IMO in the context of the mandatory application of the IMDG Code through the SOLAS Convention.

119. The Committee also noted that the International Atomic Energy Agency (IAEA) had decided to follow the same cycle of amendments for its Regulations for the Safe Transport of Radioactive Material in order to facilitate cooperation with the Committee and implementation through international legal instruments.

ACTIVITIES RELATED TO THE IMPLEMENTATION OF AGENDA 21

Global harmonization of systems of classification and labelling chemicals

Document: ST/SG/AC.10/2000/42 (Secretariat)

Informal document: INF.28 (Chairman)

120. The Committee took note of the report on the sixteenth consultation of the IOMC Coordinating Group for Harmonization of Chemical Classification Systems, organized by ILO in Geneva on 25 and 26 May 2000, and the information submitted by the Chairman on the seventeenth consultation of the Group in Rome on 2 and 3 November 2000.

Health hazards and hazards to the environment

Informal documents: INF.12 (OECD)
INF.30 (Chairman)
INF.71 (OECD)

121. The Committee took note of the results of the work carried out by OECD in the sphere of health hazards and hazards to the environment, particularly regarding the classification of mixtures, and questions still pending.

122. The observer from the Bahamas said that Chapter 9 of the document concerning the hazards to the environment from mixtures seemed very complicated and asked if it could not be simplified to make it more easily understood by persons who were not chemical specialists, especially with a view to its application in regulating transport.

123. The representative of OECD said that the chapter would be rewritten but that several criteria (toxicity, biodegradability and persistence) needed to be taken into account and this did not make the task any easier. His organization would nevertheless endeavour to cut down the number of options presented in the document. He said that OECD believed that a final proposal for mixtures would be ready for May 2001.

Document: ST/SG/AC.10/C.3/2000/4 (Argentina)
ST/SG/AC.10/2000/4 (Germany)

Informal document: INF.33 (United Kingdom)

124. The expert from the United Kingdom introduced a revised version of his draft of Chapter 2.9 of the Model Regulations concerning the classification of substances which were environmentally hazardous because of the risk of aquatic pollution. However, since the Sub-Committee had decided that these provisions should not be included in the next edition of the Model Regulations (see also ST/SG/AC.10/C.3/36, paras. 126 to 134), he invited all interested experts to send him their comments by the end of March 2001 so that he could prepare a new official proposal.

125. For the same reasons, the documents of Argentina and Germany were included in the programme of work for the forthcoming biennium.

Physical hazards

Documents: ST/SG/AC.10/C.3/28/Add.3
ST/SG/AC.10/C.3/34, annex 5
ST/SG/AC.10/C.3/36, annex 4
ST/SG/AC.10/C.3/2000/34 (CSMA/FEA)
ST/SG/AC.10/2000/23 (FEA)
ST/SG/AC.10/2000/26 (United States of America)

Informal documents: INF.69/Add.1 (Report on the Working Group on Gas Receptacles and Multiple-Element Gas Containers)
INF.78 (Chairman of the UN/ILO Working Group on the Harmonization of the Classification Criteria for Physical Hazards)
INF.61 (FEA)

126. This sub-item was discussed by the UN/ILO Working Group on the Harmonization of the Classification Criteria for Physical Hazards whose report is reproduced as annex 5.

Labelling and hazard communication systems

Document : ST/SG/AC.10/2000/43 (Secretariat/ILO)

Informal documents : INF.29 (Chairman)
INF.47 (ILO)

127. The Committee took note of the reports of the fifth and sixth meetings of the ILO Working group for the Harmonization of Chemical Hazard Communication (Geneva, 22-25 May 2000 and Rome, 30 October-2 November 2000), as well as of the report on these meetings prepared by the Chairman.

128. The Committee also noted that a ILO drafting group would meet from 22 to 25 January 2001 to prepare a "step 3" document and that it was expected that a final proposal could be adopted at the next ILO Working Group meeting (21-25 May 2001) that could be endorsed by the ILO Governing Council in June 2001.

129. Several experts expressed concern at the fact that the exploding bomb symbol might be used for explosives of all divisions. They wished that experts on explosives could participate in the work of the ILO Working Group to explain that for divisions 1.4, 1.5 and 1.6 it is important to communicate to emergency response services that there is no explosion risk and that overstating that risk with an exploding bomb symbol might lead to the wrong emergency action.

130. For the question of the colour background of hazard pictograms, several experts considered that it would be important to keep the yellow colour for the oxidizing hazard since the colour might be even more important than the symbol for emergency responders. Some of them

said that they did not see difficulties in using the same colour, e.g. orange or yellow, for the GHS label background as for one specific hazard pictogram, as this was already the case in Europe in the case of the orange colour.

131. It was noted that consideration was being given to using the transport hazard pictogram for other sectors. Several experts considered that, if this was the case, it would be important to make sure that the system is consistent i.e. that the diamond shaped hazard pictogram not be used for other hazard levels beyond those used in transport, as this would disrupt the application of transport regulations. For example, the skull and crossbones symbol which is likely to be used for the most acute toxicity levels, i.e. by most regulatory systems including transport, should not be used for lower toxicity categories which are not subject to transport regulations. Different symbols/pictograms, if needed, should be developed for other levels, to avoid confusion.

Implementation of resolution 1999/65 of the Economic and Social Council

Document: ST/SG/AC.10/2000/43 (Secretariat)

Informal document: INF.41 (United States of America and Italy)

132. The Committee noted that the Economic and Social Council had agreed to reconfigure it, as from 2001, as a Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals, with two sub-committees, the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) and the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee), provided that the total meeting time would not exceed that currently allocated to the work of the Committee in a biennium. The Committee also noted that meeting dates had already been scheduled by the secretariat for the various meetings of the Committee and of the sub-committees, and that the General Assembly had agreed to provide additional staff resources to the ECE Transport Division for these new activities in 2001.

133. The Committee noted that, at the time of this session, only seven United Nations member States had applied for membership on the new GHS Sub-Committee.

134. The representative of ILO mentioned that during the last session of the IOMC Coordinating Group (see INF.28), no consensus could be reached on the composition of the reconfigured Committee.

135. In INF.43, the experts of the United States of America and of Italy considered that a large committee with open participation might result in imbalance in the representation of GHS and transport interests, and that the likelihood of the Committee venturing beyond the intentions of the terms of reference might increase. They believed that, given the limited terms of reference, the most cost effective approach would be to have a small committee with decisions made on a consensus basis, and they proposed that the members of the Committee should be the officers (chairman and vice-chairman) of each sub-committee.

136. A member of the secretariat recalled that the question of composition of the Committee had already been discussed by the IOMC Coordinating Group and agreed as follows: "Although it is hard to determine its exact size and format at present, for the - reconfigured - Committee to be effective, it is necessary to have as wide a participation and membership as practically possible. This is to be drawn from the representation in the sub-committees." This had been presented to the Economic and Social Council as a consensus view of the IOMC Coordinating Group by the President of the Intergovernmental Forum on Chemical Safety (E/1999/90), and as a condition by the Committee itself at its last session (ST/SG/AC.10/25, para. 114 (d)), endorsed in January 1999 by the IOMC Coordinating Group and presented to the Council by the Secretary General in document E/1999/43, para. 21(d) referred to in resolution 1999/65. He noted that although the issue had been raised again at the level of the IOMC Coordinating Group, no different consensus or even clear majority decision had been reached, and he felt that if the Committee wished to propose a different solution for the membership of the Committee, it would have to be substantiated by convincing arguments supported by a wide majority in order to avoid controversial debates at the Council's level.

137. The expert from Canada supported the views of the experts from the United States of America and Italy.

138. The experts from Belgium, Czech Republic, France, Germany, the Netherlands, Norway, Poland, Sweden and the United Kingdom, as well as observers of Portugal and Austria said that they did not support the proposal in INF.43. Some of them considered that the membership of the Committee should be limited to 8-12 member States, others to member States participating in both sub-committees, and others that it should be open to all member States.

PROGRAMME OF WORK

Programme of work for the biennium 2001-2002 and related proposals

Programme of work of the Sub-Committee of Experts on the Transport of Dangerous Goods

Documents:	ST/SG/AC.10/2000/6 (ICDM/ICCR)	(Performance testing for packagings)
	ST/SG/AC.10/2000/9 (Germany)	(Amendments to chapter 6.7)
	ST/SG/AC.10/2000/12 (Spain)	(Tests for packagings)
	ST/SG/AC.10/2000/18 (ICPP)	(Reprocessing of flexible IBCs)
	ST/SG/AC.10/2000/21 (Germany)	(Rationalized development of regulations)
	ST/SG/AC.10/2000/29 (Netherlands)	(Assignment of UN numbers of substances, solutions and mixtures)
	ST/SG/AC.10/2000/31 (Japan and Netherlands)	(UN pressure vessel test)
	ST/SG/AC.10/2000/32 (Canada)	(Division 6.2)
	ST/SG/AC.10/2000/34 (ICCA)	(Substances which emit corrosive or toxic gases when wet)
Informal documents :	INF.48 (Netherlands)	(Transport of professional fireworks)
	INF.49 (United Kingdom)	(Publication of guiding principles)
	INF.51 (WHO)	(Division 6.2)
	INF.58 (SEFEL)	(Tests for packagings)
	INF.59 (Spain)	(Tests for packagings)

139. The Committee agreed that the work programme for the biennium 2001-2002 of the Sub-Committee of Experts on the Transport of Dangerous Goods should include the following subjects:

(a) Additional provisions for the transport of gases;
(b) Provisions for the transport of solid substances in bulk in containers;

(c) Revision of Division 6.2 provisions;
(d) Criteria for the corrosiveness of liquids and solids belonging to Class 8, Packing Group III, for steel and aluminium;
(e) Classification criteria for fireworks;
(f) Classification of ammonium nitrate emulsions, suspensions and gels;
(g) Cooperation with IAEA for amendments to Class 7 provisions and harmonization of terminology;
(h) Follow-up to Agenda 21, Chapter 19, Programme Area B (Global harmonization of systems of classification and labelling of chemicals, including
- criteria for flammable aerosols;
- classification provisions for substances which in contact with water, emits toxic or corrosive gases;
- classification provisions for substances hazardous to the aquatic environment;
in cooperation with ILO, OECD and the GHS Sub-Committee, as relevant);
(i) Correct assignment of UN Nos., proper shipping names and packing instruction numbers with respect to physical state;
(j) Development of a new harmonized UN pressure vessel test;
(k) Substances prohibited for transport;
(l) Performance testing for packagings;
(m) Equivalence wall thickness formula for tanks;
(n) Miscellaneous proposals of amendments to the Model Regulations.

Reprocessing of flexible IBCs

140. For ST/SG/AC.10/2000/18, the Committee took note of ICPP's proposal to include the question of reprocessing flexible IBCs in the programme of work for the next biennium. Some experts expressed reservations, however, as to the timeliness of such work, partly because they were not certain that the reprocessing of flexible IBCs was economically viable, and partly because ICPP did not seem to be the appropriate organization for submitting proposals concerning all types of flexible IBCs.

141. The Committee requested ICPP to consult the other organizations concerned so that a comprehensive proposal for flexible IBCs could be submitted if the industry effectively wished to introduce provisions in that regard.

Classification of fireworks

142. The expert from the Netherlands (see also INF.48) informed the Committee that a very serious accident caused by professional fireworks, following a massive explosion in a warehouse, had recently cast a tragic shadow over his country. Investigations had shown that in practice many such fireworks were imported to the Netherlands by sea and declared as 1.4G substances

although they belonged to Division 1.3 and sometimes even 1.1, and that it ensued that the safety rules for stowage during transport and storage were not respected. He therefore proposed that a working group should be established to consider the problems of classifying these fireworks in the forthcoming biennium.

143. The expert from China reminded the meeting that his country was the first producer of fireworks in the world. He said that although an accident of that nature had never occurred in his country during the storage or transport of this type of fireworks, he was in favour of the proposal by the Netherlands with a view to improving safety worldwide.

144. Several experts said that, whatever the producer country, it was frequently observed on import that such fireworks had been incorrectly classified. They were therefore in favour of the proposal by the Netherlands.

145. The expert from the United States of America said that his country was probably the world's biggest importer of fireworks of this kind and that all imported fireworks were required to be classified by the competent authority in the United States of America by analogy on the basis of the United Nations Manual of Tests and Criteria. He said that there had been no need to revise the classification criteria, and that the problem raised was principally a question of the correct application of the criteria.

146. The expert from Norway considered that there was a problem with the present system of tests for explosives in vehicles, containers or closed compartments, since, as NOTE 2 to 2.1.3.2.3 indicated, the competent authority could make provision for special tests to take account of self-confinement, but the Manual did not include such tests. This was perhaps an occasion for reflecting on the question.

147. The expert from the Netherlands admitted that the classification system should not be called in question, but said that the practical implementation of the system should be reviewed and that he would prepare a document on the subject for the July 2001 session of the Sub-Committee. The aim is to develop a system where it is not necessary to test every firework separately. The basis for the proposal would be the existing systems for authorization, which is used in different countries and evaluation of test results with fireworks.

148. The Chairman invited the various delegations to consult with each other meanwhile and transmit any information on their experiences to the expert from the Netherlands.

Revision of Division 6.2 provisions

149. For the revision of Division 6.2 provisions, the expert from Canada agreed to act as the lead country on behalf of the Committee in liaising with WHO, the secretariat of the Basel Convention, the secretariat of the Convention on Biodiversity and others in developing a new basis for addressing Division 6.2.

ANY OTHER BUSINESS

Request by the World Nuclear Transport Institute (WNTI) for consultative status

Informal document: INF.20

163. The Committee agreed to grant consultative status to WNTI.

ADOPTION OF THE REPORT

164. The Committee adopted the report on its twenty-first session and its annexes on the basis of a draft prepared by the secretariat.

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Annex 1

Report of the Working Group on Gas Receptacles and Multiple-Element Gas Containers (MEGCs)

(see also report of the Committee, paras. 13-21)

1. The Working Group met under the chairmanship of Mr. H. Puype (EIGA). Representatives of Canada, the European Commission, France, Germany, Switzerland, the United Kingdom, the United States of America, ISO, AEGPL, CGA, ECMA, and EIGA participated.

2. The annex * to this report reproduces the text agreed by the Working Group during its session from 4 to 7 December 2000.

3. The Working Group reviewed the consolidated EIGA document ST/SG/AC.10/2000/22 that presented the outcome of the previous discussions with additions from Canada and United States of America. Further proposals taken into account were ST/SG/AC.10/2000/27 (United States of America), ST/SG/AC.10/2000/30 (CGA) and ST/SG/AC.10/2000/38 (France) together with informal documents INF.10, INF.16, INF.23 (United Kingdom), INF. 24 (EIGA), INF.38 (Canada), INF.39 (ISO) and INF.46 (United States of America).

4. In the proposals 1 and 2, the Working Group decided to limit the capacity of pressure drums to 1000 litres. The reference temperature of -50 °C for compressed gases was confirmed and was clarified by adding further text to the definition. This entails the suppression of the word "compressed" in the proper shipping name of eleven gases. The definition of test pressure was modified so that it was suitable for all classes.

5. Other changes for MEGCs in proposals 6 and 7 concerned packing provisions and construction requirements and were largely editorial which brought further refinements and clarifications to the provisions.

6. Packing Instruction P200 now includes a table of substances of classes other than Class 2 to which it is also assigned. PP79 for UN 1040 ethylene oxide was incorporated in the gas specific provisions of P200.

7. Some LC_{50} values are under review and have been annotated with an asterisk in the table. A number of filling ratios of concern have been proposed by CGA. They were incorporated in the table in application of the precautionary principle adopted in the previous session. During the discussion on filling ratios for other substances there appeared to be no major reason for concern in adopting the values proposed by EIGA and endorsed by the Federal Institute for Materials Research and Testing (BAM) (Germany). The United States of America uses a reference temperature of 55 °C (130 °F), whereas the Working Group refers to 65 °C. This should automatically lead to more conservative values.

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* *Reproduced during the session as informal document INF.69/Add.1, supplemented by informal document INF.70. Not reproduced here since the adopted texts may be found in annex 2 (ST/SG/AC.10/27/Add.1).*

8. The adoption of additional limiting factors for toxic gases as proposed by the United States of America was not supported by the group considering the above and the already agreed upon restrictions in special packing provision "k" relating to these substances.

9. The section previously entitled Quality Conformance was renamed Conformity Assessment and Pressure Receptacle Approval. There was no majority for implementing the United Kingdom proposal based on Class 7, and the text adopted was based upon the EIGA informal document INF. 24 which, in turn, was based upon Canada's adaptation of ISO Technical Report 14600.

10. Considerable time was spent on re-discussing marking. Due attention was given to the regulatory, operational and safety concerns expressed by various delegates. The final compromise satisfying all parties imposes a sequence on the certification and manufacturing marks. ISO agreed to study how best to distribute all other marks in a consistent way so as to ensure a practicable application.

11. Part of the discussion concerned the preferred identification marks of countries. In order to align with other packagings in the Model Regulations the group adopted the distinguishing signs of motor vehicles in international traffic, rather than the ISO alpha 2 code.

12. The Working Group supported CGA's recommendation to withdraw proposal ST/SG/AC.10/2000/30 on cryogenic receptacles. The issue will be addressed during the next biennium taking into account the proceedings at ISO TC220.

13. The Working Group accepted the recommendation of the United Kingdom informal document INF. 23 paper to retain the filling factors appearing in the 11th revision of the Model Regulations for UN 3337 (R404A), UN 3338 (R407A) and UN 3339 (R407A).

14. The Working Group proposes an extension of the mandate given by the Committee to deal with the topics which require further development both at the UN and the ISO level. Such topics include cryogenic receptacles, specific provisions for LPG and acetylene, composite cylinders, pressure drums and further operational requirements on filling and requalification.

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Annex 2

Amendments to the eleventh revised edition of the

Recommendations on the Transport of Dangerous Goods, Model Regulations

(See ST/SG/AC.10/27/Add.1)

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Annex 3

Report of the working group on ST/SG/AC.10/2000/2

Chapter 2.4

2.4.2.3.2.3 Amend the reference in remarks (1), (4) and (6) after the table as follows:

Replace "7.1.4.2" with "7.1.4.3".

PART 3

3.1.2 Add the following notes under the heading "Proper shipping name":

"***NOTE 1***: *For proper shipping names to be used for dangerous goods transported as limited quantities, see 3.4.7.*

NOTE 2: *For proper shipping names used for the transport of samples, see 2.0.4"*

Dangerous Goods List

SEED CAKE - Need a specific proposal; but agreed to delete SP 36 as per INF.25, para. 3 (b).

UN 1613, etc. - Not adopted, consider including a list of prohibited substances next biennium.

UN 1839, 1939, 2280 - Liquid/Solid issue, defer until next biennium.

UN 2455 - Not adopted, prohibited substance issue/defer.

UN 2678, 2682 - Not adopted. Liquid/Solid issue.

UN 2754 - Not adopted - No substantiating flash point data available. IMO should reconsider.

Other Liquid/Solid issues deferred.

Chapter 3.3

Proposal on SP 900 not adopted - Consider listing prohibited substances next biennium.

SP 29 - No technical basis for additional sentence. Not adopted.

Amendments to SP 216 and 218 - Not adopted. Required detailed proposal.

PART 4

4.1.7.0.1 proposed in document ST/SG/AC.10/C.3/2000/5 not adopted.

4.1.7.0.2 proposed in document ST/SG/AC.10/C.3/2000/5 adopted as 4.1.7.0.1 as follows:

"4.1.7.0.1 For organic peroxides, all receptacles shall be "effectively closed". Where significant internal pressure may develop in a package by the evolution of gas, a vent may be fitted, provided the gas emitted will not cause danger, otherwise the degree of filling shall be limited. Any venting device shall be so constructed that liquid will not escape when the package is in an upright position and it shall be able to prevent ingress of impurities. The outer packaging, if any, shall be so designed as not to interfere with the operation of the venting device."

4.1.7.2.3 proposed in document ST/SG/AC.10/C.3/2000/5 not adopted.

4.1.7.2.4 proposed in document ST/SG/AC.10/C.3/2000/5 adopted with modifications to read:

"4.1.7.2.3 For self-reactive substances temperature control is required according to 2.4.2.3.4. For organic peroxides temperature control is required according to 2.5.3.4.1. Temperature control provisions are given in 7.[illegible]4.3.1."

4.1.7.2.5 proposed in document ST/SG/AC.10/C.3/2000/5 adopted, as modified, as 4.1.7.2.4:

"4.1.7.2.4 Emergencies to be taken into account are self-accelerating decomposition and fire engulfment. To prevent explosive rupture of metal IBCs with a complete metal casing, the emergency-relief devices shall be designed to vent all the decomposition products and vapours evolved during self-accelerating decomposition or during a period of not less than one hour of complete fire engulfment calculated by the equations given in 4.2.1.13.8."

PART 5

Chapter 5.1

Note not adopted; consider for guidance material as per United Kingdom's informal paper.

Chapter 5.2

5.2.2.1.12 Add a new paragraph to read:

"5.2.2.1.12 Special provisions for the labelling of self-reactive substances

A Class 1 subsidiary risk label shall be applied for type B self-reactive substances, unless the competent authority has permitted this label to be dispensed with for a

specific packaging because test data have proved that the self-reactive substance in such a packaging does not exhibit explosive behaviour."

Secretariat to renumber paragraphs to place in normal sequence as per class number.

Chapter 5.3

Proposed revisions (5.3.1.1.1 and 5.3.2) for placarding and marking not adopted. IMO to reconsider.

Change in 5.3.2.1.1 (b) - Re 4000 kg, not adopted, more comprehensive proposal required.

Re multicompartment tanks - In 5.3.2.1.1 (a), add before the semicolon:

"including on each compartment of a multicompartment tank transport unit";

In 5.3.2.1.2 (a) and (b) - Strike "the" and insert "each" before the word "placard" (two times).

NO OTHER ITEMS ADOPTED.

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Annex 4

Amendments to the third revised edition of the

Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria

(See ST/SG/AC.10/27/Add.2)

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Annex 5

Report of the UN/ILO Working Group on the Harmonization of the Classification Criteria for Physical Hazards

1. The UN/ILO Working Group on the Harmonization of Classification Criteria for Physical Hazards met on 11 December 2000 under the chairmanship of Mr. G. Oberreuter (Germany).

2. The representative of the following countries and organizations took part in this session : Argentina, Australia, Austria, Bahamas, Belgium, Brazil, Canada, China, Czech Republic, Finland, France, Germany, Islamic Republic of Iran, Italy, Japan, Mexico, Netherlands, Norway, South Africa, Sweden, Switzerland, Tunisia, United Kingdom, United States of America, European Commission, Chemical Specialities Manufacturers Association (CSMA), Federation of European Aerosol Associations (FEA), Hazardous Materials Advisory Council (HMAC), International Council of Chemical Associations (ICCA), International Maritime Organization (IMO) and World Nuclear Transport Institute (WNTI).

Gases

Informal documents : INF.28 (Chairman of the Committee)
INF.78 (Chairman of the Working Group)

3. The Working Group noted that the IOMC Coordinating Group confirmed that this Working Group should develop classification criteria for compressed gases as a basis for harmonization of hazard communication in this area.

4. The Working Group noted that the Committee had adopted new provisions concerning receptacles for gases and that new definitions had been agreed in this respect.

5. The Working Group considered that, in response to the request of the IOMC Coordinating Group, it had to develop criteria for identifying the hazards presented by gases, irrespective of other hazards such as toxicity or flammability. Therefore the Working Group considered that the definition should be as follows:

> "Gases which are contained in a receptacle at a pressure not less than 280 kPa at 20 °C, or as a refrigerated liquid, are considered as dangerous irrespective of the fact that they may also present other hazardous properties such as toxicity or flammability. Gases, for packing purposes, are also divided as follows:
>
> (a) ***Compressed gas*:** a gas which when packaged under pressure is entirely gaseous at -50 °C; this category includes all gases with a critical temperature less than or equal to -50 °C;
>
> (b) ***Liquefied gas*:** a gas which, when packaged under pressure, is partially liquid at temperatures above -50 °C. A distinction is made between:

High pressure liquefied gas: a gas with a critical temperature between -50 °C and +65 °C; and

Low pressure liquefied gas: a gas with a critical temperature above +65 °C;

(c) ***Refrigerated liquefied gas*:** a gas which when packaged is made partially liquid because of its low temperature; or

(d) ***Dissolved gas*:** a gas which when packaged under pressure is dissolved in a liquid phase solvent."

Flammability of aerosols

Documents : ST/SG/AC.10/C.3/2000/34 (CSMA/FEA)
ST/SG/AC.10/2000/23 (FEA)
ST/SG/AC.10/2000/26 (United States of America)
ST/SG/AC.10/C.3/34, annex 5
ST/SG/AC.10/C.3/36, annex 4

Informal document : INF.61 (FEA)

6. The Working Group reviewed the decisions already taken and reached the following considerations.

7. With respect to ST/SG/AC.10/C.3/36, annex 4, para. 8, the second orientation test is relevant for the distance ignition test only.

8. The Working Group agreed that aerosols with 1% or less of flammable components should be classified as non-flammable and those with 85% or more flammable components should be classified as extremely flammable.

9. The representative of the European Commission, supported by some delegations, said that he would prefer to define three levels of flammability as this would encourage the industry to produce aerosols falling within the middle category. If two levels only were provided there would be too much difference between the lower level and the higher level and this would not constitute an incentive for the industry to consider medium flammable products rather than extremely flammable products. Some delegations did not consider it appropriate to consider encouraging the use of less flammable compounds as a basis for developing criteria.

10. For foam aerosols, if there is a stable flame of 4 cm height for not less than 2 seconds, the aerosol should be considered as flammable. Another criterion was proposed by Italy for extreme flammability as follows: [≥ 20 cm] stable flame [and] [or] [seven or more] seconds. These extreme flammability figures were placed in square brackets pending verification by the industry.

11. For spray aerosols, it was agreed that if the heat of combustion was above 20 kJ/g, the aerosol would be considered as flammable. A second value of [30 kJ/g] was placed in square brackets for a higher level.

12. If the heat of combustion of spray aerosols was below 20 kJ/g, an ignition distance test should be performed, and should be considered as positive if the ignition occurred at a distance comprised between 15 cm and 90 cm.

13. If ignition occurred at a distance of [45 cm/90 cm] (to be confirmed) or more, the aerosol would be considered for classification in the higher flammability level.

14. If there were no positive results in the ignition distance test an enclosed space test should be carried out. Two parameters have to be considered: time equivalent and deflagration density. A time equivalent of 150 s/m^3 was agreed in the July 2000 meeting, but 300 s/m^3 was now also suggested for consideration. As for deflagration density a value of 600 g/m^3 was mentioned, but equal numbers to the time equivalent were also discussed. These values are still open for discussion.

15. With respect to the three levels of flammability within the existing system of the European Union, the representative of FEA said that they were related to the flash point of the contents (below 0 °C, between 0 °C and 21 °C, between 21 °C and 55 °C).

16. The European Commission was invited to consider whether it could be possible to amend that system in accordance with the proposed new criteria, taking into account that, instead of a system with definitions, the proposed system would include a specific test regime and sequence.

17. The Working Group agreed that the final decision on remaining issues should be left to another session of the Working Group during the next session of the Sub-Committee of Experts on the Transport of Dangerous Goods if data and proposals were submitted in time, especially by the industry (deadline: 12 April 2001), or otherwise during the December session.

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Annex 6

Draft resolution 2001/XXX of the Economic and Social Council

2001/XXX Work of the Committee of Experts on the Transport of Dangerous Goods

The Economic and Social Council,

Recalling its resolution 1999/62 of 30 July 1999,

Recalling also its resolutions 1995/6 of 19 July 19995, and in particular resolution 1999/65 of 26 October 1999 whereby it decided to reconfigure, as from 2001, the Committee into a Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals with two sub-committees,

Bearing in mind the increasing volume of dangerous goods in world-wide commerce and the rapid expansion of technology and innovation,

Bearing also in mind the continuing need to meet the growing concern for the protection of life, property and the environment through the safe transport of dangerous goods while facilitating trade,

Aware that, in order to achieve internationally harmonized laws, the Economic Commission for Europe, the International Maritime Organization, the International Civil Aviation Organization and other specialized agencies and international organizations involved in activities related to the transport of dangerous goods have responded positively to the Council's various resolutions adopted since 15 April 1953, and that, being committed to taking the recommendations of the Committee of Experts on the Transport of Dangerous Goods as a basis for the formulation of their legal or technical instruments applicable to international transport by road, rail, inland waterway, air or sea, those organizations therefore rely on the work of the Committee,

Aware also that many Member States have responded positively to the same resolutions and are also committed to taking the recommendations of the Committee of Experts on the Transport of Dangerous Goods as a basis for the formulation of their national regulations, in harmony with the international framework,

Noting with satisfaction that the Economic and Social Council for Asia and Pacific has published "Guidelines for the establishment of national and regional systems for inland transportation of dangerous goods"[1], which led several developing countries of the region to develop national regulations based on the UN Recommendations on the Transport of Dangerous Goods and to envisage developing regional systems consistent with the Model Regulations annexed to these UN Recommendations,

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1 United Nations publication, Sales No. E.98.II.F.49.

A. Work of the Committee of Experts during the biennium 1999-2000

1. Takes note of the report of the Secretary-General on the work of the Committee of Experts on the Transport of Dangerous Goods during the biennium 1999-2000 [2] in particular regarding the adoption of new and amended provisions [3] for inclusion in the Recommendations on the Transport of Dangerous Goods, Model Regulations [4] and in the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria [5];

2. Commends the Secretary-General for the publication of the eleventh revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations[4], in Chinese, English, French, Spanish and Russian and for the publication of the third revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria in English, Chinese, and Russian [5];

3. Urges the Secretary-General to publish the eleventh revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations in Arabic, as well as the third revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria in Arabic, French and Spanish without delay;

4. Requests the Secretary-General:

(a) To circulate the new and amended recommendations to the Governments of Member States, the specialized agencies, the International Atomic Energy Agency and other international organizations concerned;

(b) To publish a twelfth revised version [6] of the Recommendations on the Transport of Dangerous Goods, Model Regulations, and amendments to the third revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria [7] in all the official languages of the United Nations, in the most cost-effective manner, not later than the end of 2001;

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2 E/2001/...

3 ST/SG/AC.10/27/Add.1 and -/Add.2.

4 ST/SG/AC.10/1/Rev.11 (United Nations publication, Sales Nos. C.99.VIII.1, E.99.VIII.1, F.99.VII.1, S.99.VII.1 and R.99.VII.1).

5 ST/SG/AC.10/11/Rev.3 (United Nations publication, Sales Nos. E.99.VIII.2, C.99.VIII.2 and R.99.VIII.2).

6 ST/SG/AC.10/1/Rev.12.

7 ST/SG/AC.10/11/Rev.3, amdt.1.

(c) To give further consideration to the possibility of publishing the Recommendations on the Transport of Dangerous Goods on CD-ROM if possible as a navigable version, e.g. by commercial arrangement with external contractors;

5. Invites all Governments, the specialized agencies, the International Atomic Energy Agency and the other international organizations concerned to transmit to the secretariat of the Committee[8] their views on the Committee's work, together with any comments that they may wish to make on the amended recommendations;

6. Invites all interested Governments, regional commissions and specialized agencies and the international organizations concerned, when developing or updating appropriate codes and regulations, to take full account of the recommendations of the Committee;

7. Encourages regional commissions which have not yet done so to promote the development of national and regional systems of regulations for the inland transport of dangerous goods on the basis of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, and related instruments.

B. Programme of work for the biennium 2001-2002

8. Approves the programme of work [9] of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals and of its sub-committees, for the biennium 2001-2002, as follows:

(a) Sub-Committee of Experts on the Transport of Dangerous Goods:

- Additional provisions for the transport of gases;
- Provisions for the transport of solid substances in bulk in containers;
- Revision of Division 6.2 provisions;
- Criteria for the corrosiveness of liquids and solids belonging to Class 8, Packing Group III, for steel and aluminium;
- Classification criteria for fireworks;
- Classification of ammonium nitrate emulsions, suspensions and gels;
- Cooperation with IAEA for amendments to Class 7 provisions and harmonization of terminology;
- Follow-up to Agenda 21, Chapter 19, Programme Area B (Global harmonization of systems of classification and labelling of chemicals), including:
  - criteria for flammable aerosols;
  - classification provisions for substances which, in contact with water, emits toxic or corrosive gases;

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[8] Transport Divison of the Economic Commission for Europe.

[9] ST/SG/AC.10/27, paras. 139-156.

- classification provisions for substances hazardous to the aquatic environment;

in cooperation with ILO, OECD and the Sub-Committee on the Global Harmonization of Systems of Classification and Labelling of Chemicals, as relevant;

- Correct assignment of UN Nos., proper shipping names and packing instruction numbers with respect to physical state;
- Development of a new harmonized UN pressure vessel test;
- Substances prohibited for transport;
- Performance testing for packagings;
- Equivalence wall thickness formula for tanks;
- Miscellaneous proposals of amendments to the Model Regulations.

(b) Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals:

- Preparation of a document describing the globally harmonized system of classification and labelling of chemicals (GHS) and of recommendations related to its implementation;

- Development of cooperation arrangements with international organizations involved in the development of the GHS and of working arrangements with the Sub-Committee on the Transport of Dangerous Goods.

C. Report to the Council

9. Requests the Secretary-General to submit a report to the Council in 2003 on the implementation of the present resolution.